

The term "broad" is said to be subjective and therefore unclear. Applicants assume the Examiner is referring to the term "broad molecular weight distribution propylene polymer material" in claim 6, for example. The term "broad molecular weight distribution" is defined on page 10 at lines 7-10 as a polymer having Mw/Mn of about 5 to about 60.

The rejection of claims 1, 2, 4-7 and 10-14 under 35 U.S.C. §103(a) as being unpatentable over Lindner et al. (USP 4,767,821) is traversed.

The present invention deals with a method for improving the thermal stability of polymers of acrylates substituted in the alpha-position by a 1-3 C alkyl group by blending the graft copolymer with 1-25% of a fluorinated olefin polymer. The fluorinated polyolefin also improves the oxygen barrier properties of the graft copolymer.

Lindner et al. disclose a process for the production of a powder form polymer mixture which contains (A) a thermoplastic graft polymer of a monomer on a rubber substrate having a rubber content of 8-80%, and (B) a highly disperse particulate tetrafluoroethylene polymer. The dispersions are mixed and coagulated, then dried. The thermoplastic graft copolymer may include EPDM grafted by methyl methacrylate, although there are no specific examples of such a graft copolymer. Other suitable substrates include alkyl acrylate rubbers, silicone rubbers, and acrylonitrile/butadiene rubbers. Other suitable grafting monomers include styrene, vinyl chloride and vinyl acetate. Choice of EPDM and methyl methacrylate is said to be obvious to a practitioner having ordinary skill in the art at the time of the invention in the expectation of adequate results, since such lies within the broad ambit of the reference and absent any showing of surprising or unexpected results.

JS There is no component in the composition of Lindner et al. that corresponds to Applicant's component (A), the graft copolymer comprising a backbone of propylene polymer material having graft polymerized thereto one or more specified acrylic monomers. The rubber substrate for the graft copolymers of Lindner et al. has no counterpart in Applicant's composition. If the Examiner is equating the rubber substrate with components (4) or (5) of Applicant's claim 2, it should be noted that these components are olefin polymer compositions containing three fractions: a crystalline fraction, a semi-crystalline fraction, and an amorphous fraction, and the compositions are

prepared by sequential polymerization in two or more stages. In Applicant's invention, addition of rubber is optional, depending on whether impact modification is desired.

There is no mention in Lindner et al. of improving the thermal stability of acrylic graft copolymers by adding a small amount of a fluorinated polymer, which is the main point of Applicant's invention. There is also no mention in Lindner et al. of improving the oxygen barrier properties of an acrylic graft copolymer. The object of Lindner et al. is provide a powderform polymer mixture containing poly(TFE). Therefore, Applicant's invention is not obvious over Lindner et al.

The rejection of claims 1, 2 and 4-16 under 35 U.S.C. §103(a) as being unpatentable over Genz et al. (USP 4,945,130) is traversed.

Genz et al. disclose a thermoplastic molding composition consisting of (A) an aromatic polycarbonate, (B) a thermotropic polymer such as a polyester carbonate, (C) a fluorinated polyolefin and (D) an elastomeric graft polymer. The combination of the fluorinated polyolefin and the graft polymer reduce the tendency of the blend of (A) and (B) to delamination after molding. Particularly suitable graft copolymers include polybutadiene and butadiene/styrene copolymers containing up to 30% by weight of a lower alkyl ester of acrylic or methacrylic acid such as methyl methacrylate, ethyl acrylate, methyl acrylate or ethyl methacrylate.

Applicant's specification does not disclose using a combination of a fluorinated polyolefin and an elastomeric graft copolymer as an additive for another polymer system. There is no motivation to add Applicant's blend of an acrylic graft copolymer and a fluorinated polyolefin to another polymer system, since the object of Applicant's invention is to prevent depolymerization of the graft copolymer by adding the fluorinated polyolefin. There is no graft copolymer disclosed in Applicant's specification that corresponds to the elastomeric graft copolymers of Genz et al. Therefore Applicant's invention is not obvious over Genz et al.

In view of the above, the Examiner is respectfully requested to withdraw the rejections, allow claims 1-16, and pass this application to issue.

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